

REMARKS

Claims 1-13 and 17-41 are pending in the application. Claims 4, 6, 8, 10, 24-26, 30-32, 36-38 and 42-44 are withdrawn. Thus, only Claims 1-3, 5, 7, 9, 11-13, 17-23, 27-29, 33-35 and 39-41 stand for consideration.

Applicants herein cancel Claims 1, 11-13 and 17 and amend Claims 2 and 7.

All claims stand rejected as anticipated by Marchman, U.S. Patent No 5,480,049, as anticipated by Marchman, U.S. Patent No. 5,395,741 or as obvious in view of Marchman '049 variously combined with Turner, U.S. Patent No. 4,469,554, Laming et al., U.S. Patent No. 6,303,041, or Yamane et al., U.S. Patent No. 5,566,262.

Applicants respectfully traverse the rejections of the claims for the reasons stated below.

THE CLAIMED INVENTION

Claim 2 recites:

A method for processing an end portion of an optical fiber element having a center core in the axial center thereof, a cylindrical clad surrounding said core and an outer cover coating film surrounding said clad, comprising the steps of:
removing said coating film . . . ;
dipping . . . into an etchant capable of etching materials of said core and clad
. . . ;
causing such a portion of the clad

Claim 3 and 7 recite a method comprising providing a level controlling means for restraining the level surface of the etchant to the optical fiber element.

In conjunction with the level controlling means of Claims 3 and 7, Claims 21, 27, 33 and 39 recite a lower specific-gravity liquid. A liquid lighter than the etchant prevents distortion by vibrations, wind pressure, etc. This improves yield (page 19, line 26 though page 20, line 14).

THE CITED PRIOR ART

Marchman '049 states:

Referring to FIG. 1, a fiber segment 10, typically an optical fiber segment, typically takes the form of a solid circular cylinder having a diameter D. It is held by a holder 45, typically made of teflon, with the aid of a segment of adhesive tape 31. The material of the glass fiber segment 10 can be but need not be uniform. For example, it can have a central core surrounded by a peripheral cladding as known in the art and as discussed in greater detail below. (col. 3, line 62 – col. 4, line 1)

Turner '554 states:

FIG. 1 shows a typical optical fiber with coating partially removed and the end partially etched. (col. 1, lines 67-68)

A typical side view of the optical cable 10 in the process of being etched is shown in FIG. 1. The organic coating 11 has been removed from the end of the cable, exposing the quartz fiber. (col. 3, lines 32-35)

THE CLAIMED INVENTION DISTINGUISHED FROM THE CITED PRIOR ART

Claim 2 is rejected as obvious over Marchman '049 in view of Turner '554.

Marchman '049 describes a glass fiber segment 10 having a central core surrounded by a peripheral cladding (col. 3, line 62 – col. 4, line 1). Turner '554 describes an optical cable 10 with an organic coating 11 (col. 3, lines 32-35). No combination of Marchman '049 and Turner '554 discloses or suggests processing an optical fiber with a clad and an outer cover coating film as recited in Claim 2.

Further, no combination of Marchman '049 and Turner '554 discloses or suggests the processing of the coating film in claim 2. The Examiner states that a residue of coating film 11 must be present on the end of the optical fiber in a small amount, but the Examiner provides no evidence to support this assertion.

In fact, Turner '554 states (col. 3, lines 33-35) and illustrates (FIG. 1) that its coating 11 is removed from the end of the cable, exposing the quartz fiber. The assertion that a small amount of the coating 11 must remain goes against the teaching of Turner '554.

Claims 3, 5, 7 and 9 are rejected as obvious over Marchman '049 in view of Turner '554.

However, Turner '554 does not use its coating 11 to restrain the level surface of its etchant 22. Turner does not use or even characterize its coating 11 other than to say it is an organic typical of optical fibers (col. 1, lines 67-68; col. 3, lines 32-35). Even in combination with Marchman '049, Turner '554 does not disclose or suggest providing its coating 11 as the level controlling means in these claims.

In conjunction with the level controlling means of Claims 3 and 7, Claims 21, 27, 33 and 39 recite a lower specific-gravity liquid. A liquid lighter than the etchant prevents distortion by vibrations, wind pressure, etc. This improves yield (page 19, line 26 though page 20, line 14). This feature is not disclosed or suggested by Marchman '049 together with Turner '554.

(Applicants do not understand the Examiner's reference to a "wet etching step" in Turner '554. The reference does not use the phrase "wet etch." Applicants respectfully ask for clarification.)

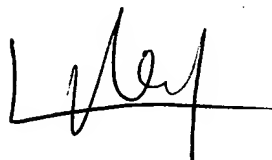
Marchman '049 in combination with Turner '554 do not disclose or suggest all of the limitations of Claim 2 — let alone those limitations combined with the additional limitations of the Claim 2-dependent claims, viz., Claims 3, 5, 18-23, 27-29 and 45.

Additionally, Marchman '049 in combination with Turner '554 do not disclose or suggest all of the limitations of Claim 7 — let alone those limitations combined with the additional limitations of the Claim 7-dependent claims, viz., Claims 9, 33-35 and 39-41.

CONCLUSION

Applicants amend the application and request reconsideration in view of the discussion set forth above. The application being in condition for allowance, a Notice of Allowance is requested.

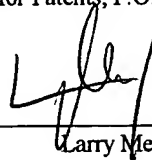
Respectfully submitted,



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I certify that this Response to Office Action and any enclosed materials are being deposited with the United States Postal Service on May 16, 2006 with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



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Enc.